

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



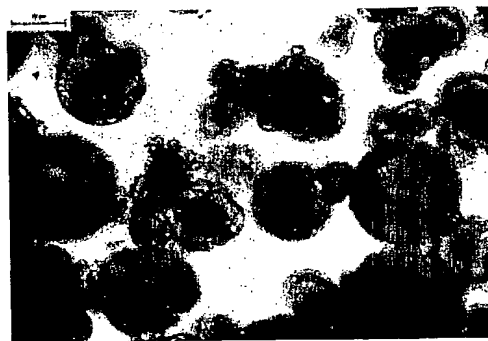
(43) International Publication Date  
10 November 2005 (10.11.2005)

PCT

(10) International Publication Number  
**WO 2005/105290 A1**

- (51) International Patent Classification<sup>7</sup>: **B01J 13/10**
- (21) International Application Number:  
PCT/US2005/013866
- (22) International Filing Date: 20 April 2005 (20.04.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/564,039 21 April 2004 (21.04.2004) US
- (71) Applicant (for all designated States except US): E.I. DUPONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LUMSDON, Simon, Owen [GB/US]; 402 Red Fox Lane, Apartment 2B, Newark, DE 19711 (US). FRIEDMANN, Thomas, E. [CH/US]; 61 Springer Court, Hockessin, DE 19707 (US). GREEN, John, Henry [GB/US]; 731 Saginaw Road, Oxford, PA 19363 (US).
- (74) Agent: SANTOPIETRO, Lois, A.; E.I. Du Pont de Nemours And Company, Legal Patent Records Center, 4417 Lancaster Pike, Wilmington, DE 19805 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ENCAPSULATION OF OILS BY COACERVATION



50 μm

(57) Abstract: The present invention describes the encapsulation of water insoluble oils by coacervation and the subsequent reduction in oxidative degradation of these oils in microencapsulated forms. Water insoluble oils useful in the process of the invention include food oils such as PUFA, flavor oils, and agriculturally and pharmaceutically active oils.